## A REVIEW OF THE AUSTRALIAN SCHIZOMID GENUS NOTOZOMUS (HUBBARDIIDAE)

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Harvey, M.S. 2000 12 31: A review of the Australian schizomid genus *Notozomus* (Hubbardiidae). *Memoirs of the Queensland Museum* **46**(1): 161-174. Brisbane. ISSN 0079-8835.

The schizomid genus *Notozomus* Harvey, 1992 is reviewed and nine new species are described: *N. boonah*, *N. bronwenae*, *N. curiosus*, *N. elongatus*, *N. faustus*, *N. jacquelinae*, *N. majesticus*, *N. maurophila* and *N. wudjl. Apozomus spec* Harvey, 1992 is transferred to *Notozomus*, forming the new combination *N. spec* (Harvey, 1992), and the female is described for the first time. The male of *N. ingham* is described for the first time. Most species are found to occupy small ranges, which may be consistent with speciation events during the mid-Tertiary, rather than being associated with the fragmentation of rainforest habitats during the Pleistocene aridity events in eastern Australia. *Arachnida*, *Schizomida*, *Hubbardiidae*, *Notozomus*, *Australia*, *taxonomy*, *biogeography*, *rainforests*.

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Members of the arachnid order Schizomida are found mostly in tropical and sub-tropical zones of the world, with some small extensions outside of this zone into neighbouring areas. Possibly the most interesting are members of the genus Hubbardia Cook which occur in the coastal and montane regions of southwestern USA (Reddell & Cokendolpher, 1995). Others, such as the facultative parthenogenic Stenochrus portoricensis Chamberlin, is widely distributed around the world, probably due to synanthropic activity (Reddell & Cokendolpher, 1995). Many of the genera currently recognised possess relatively restricted distributions, but further work on the Asian and African faunae is needed to firmly establish the boundaries of the Old World genera.

In a revision of the schizomid fauna of Australia, Harvey (1992) recognised a number of new genera, including *Notozomus*, which appeared to be endemic to the rainforest patches of the northeastern Queensland wet tropics. Although Harvey (1992) recognised seven species of Notozomus, it has become clear through further examination of collections that the genus is more diverse than previously suspected. Herein I describe nine new species and transfer Apozomus spec Harvey, 1992 to Notozomus, based upon the newly discovered female possessing the spermathecal morphology characteristic of *Notozomus*. This brings the number of described species to 17, making it one of the most diverse schizomid genera.

Methods follow Harvey (1992) and Reddell & Cokendolpher (1995). Specimens utilised in this

study are lodged in the California Academy of Sciences, San Francisco (CAS), Queensland Museum, Brisbane (QM), University of Queensland Insect Collection (UQIC), and the Western Australian Muscum, Perth (WAM). Common collector's names are abbreviated as follows: DC, D.J. Cook; MC, M. Cermak; MH, M.S. Harvey; MS, M. Shaw; PL, P. Lawless; GM, G.B. Monteith; RR, R.J. Raven; BS, B.J. Scott; GT, G.I. Thompson. Leg segments in the dimensions lists are abbreviated as follows: CL, claw; FE, femur; ME, metatarsus; PA, patella; TA, tarsus, Tl, tibia; TR, trochanter.

### Family HUBBARDIIDAE Cook, 1899 Subfamily Hubbardiinae Cook, 1899 Notozomus Harvey, 1992

Notozomus Harvey, 1992: 112; Reddell & Cokendolpher, 1995: 83.

TYPE SPECIES. *Notozonius aterpes* Harvey, 1992, by original designation.

DIAGNOSIS. *Notozomus* differs from all other Australasian schizomids by the following combination of characters: pedipalpal trochanter with mesal spur; movable cheliceral finger without accessory teeth in most species, although a small tooth is present in two species; female genitalia with gonopod and with chitinised arch, and with 4 spermathecae consisting of slender ducts terminating in ovoid or elongate receptacula; male flagellum dorso-ventrally flattened.

DESCRIPTION. Body without clavate setae. Anterior process of propeltidium with pair of setae followed by single seta; corneate eyes absent: metapeltidium divided. Pedipalp not sexually dimorphic and without armature except for mesal spur on trochanter; male pedipalps not dimorphic. Moveable cheliceral finger either without accessory teeth or with a raised mound, and with a guard tooth at end of serrula. Anterodorsal margin of femur IV produced at about 90°. Abdominal tergite II with 2 posterior setae; male abdomen not elongated; male with small devclopment of posterodorsal process on abdominal segment XII. Male flagellum ovoid and dorsoventrally flattened; female flagellum with four segments. Spermathecac consisting of two pairs of spermathecae with long, slender ducts terminating in ovoid or elongate receptacula, usually with nodules; gonopod distally rounded, not bifurcate.

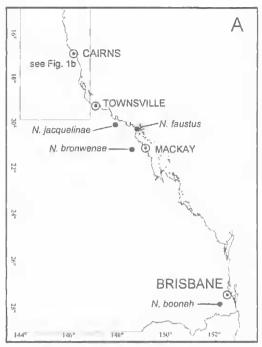
DISTRIBUTION AND BIOGEOGRAPHY. Within Australia, *Notozomus* appears restricted to eastern Qucensland, and is known with certainty as far north as Mt Finlay (*N. daviesae*) and as far south as Boonah (N. boonah). However, a single juvenile of an unidentified species from Mt Cook National Park (NP), some 40km north of Mt Finlay, was recorded by Harvey (1992), indicating that further species may yet be uncovered. Most species are found in rainforest habitats or their margins between Mt Finlay and Mt Spec, with only N. jacquelinae (Mt Abbot), N. faustus (Conway NP), N. bronwenae (Eungella NP) and *N. boonah* (near Boonah) occurring outside of this area (Fig. 1). The only other schizomids which occur in Queensland south of Mt Finlay are the two described species of Julattenius, J. lawreucei Harvey from Julatten and J. cooloola Harvey from the Cooloola region, and the three known species of Brignolizonius, B. woodwardi (Harvey) and B. walteri Harvey, from the Brisbane region, and *B. nob* (Harvey) from Byfield (Harvey, 1992, 2000). Species of *Notozomus* appear to be allopatric with other genera such as Apozonius Harvey which occurs in the drier regions to the north and west of the main distribution of Notozomus: A. weiri Harvey occurs in the McIlwraith Range, A. cactus Harvey at Iron Range (Harvey, 1992), and undescribed species of Apozomus and Bamazonius from the limestone karst systems of the Chillagoe region (Harvey, in press). Further species of Bamazomus Harvey occur even further to the north (Harvey, 1992, unpubl. data).

Although all *Notozonius* species treated herein are restricted to Queensland, two female specimens collected from New Caledonia (entreé de la

grotte Yane Wahiobi, Ile de Lifou, viii.1995, J. Lips, currently lodged in WAM) have been examined which possess all major features of the genus. I postpone description of that species until I examine all existing New Caledonian collections and establish the full extent of the fauna.

One of the most obvious features of the distribution patterns displayed within *Notozomus* is the highly disjunct distributions and the high levels of allopatry (Fig. 1). The presence of 13 species occurring between Mt Finlay and Mt Spec, in addition to a species of *Julattenius* also occurring within this sector (Harvey, 1992), makes it one of the most speciose regions in the world for schizomids.

Such levels of diversity and extreme allopatry have been reported sparingly for other invertebrate taxa within northeastern Queensland. Raven (1984, 1993) recorded seven species of the mygalomorph genus *Namirea* from rainforest habitats ranging from northcastern Queensland to the Blue Mountains, New South Wales, but only two species were recorded north of Townsville. Raven (1994) detected rampant speciation amongst various genera of barychelid mygalomorph spiders in northeastern Queensland, especially within the genera Mandjelia Raven, Moruga Raven and Trittame Koch. Platnick & Forster (1989) documented the rich anapid spider fauna of the region, and each of the nine species of Spinanapis Platnick & Forster had relatively small ranges. Monteith (1997) demonstrated high diversity amongst mezirine flat bugs, but most species were widely distributed. Hill (1984) described a number of hypselosomatine bugs with extremely small distributions, especially amongst those taxa occuring in the wet tropics. Baehr (1995) documented the high diversity and highly localised distributions of the 35 species of the primitive carabid beetle genus *Philipis* Erwin, which were found discontinuously distributed throughout the rainforests of eastern Queensland. The solc widespread species, *Philipis thompsoni* Baehr, ranges from Kuranda in the north to Cardwell Range in the south. A further 31 species occur between Cooktown and Innisfail, generally with small ranges. The remaining three species occur in rainforest remnants well to the south: P. ellioti Bachr at Mt Elliot near Townsville, P. atra Bachr at Mt Macartney, and P. subtropica Baehr at the Lamington and Springbrook Plateaus in southeastern Queensland (Bachr 1995: fig. 17). The congruence between the distribution patterns of *Philipis* and *Notozonius* (Fig. 1) is particularly striking, as both possess a core of species in the



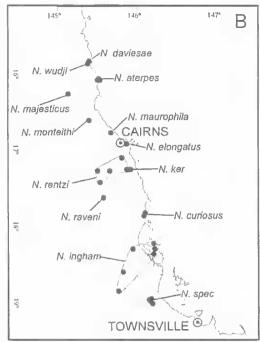


FIG. 1. Known distribution of Notozomus species.

Wet Tropies, with peripheral species occurring to southeastern Oucensland.

Comparative phylogenetic studies on animals with diverse life history traits and ecological requirements will probably assist in providing answers to the questions posed by tropical rainforest vicariance in northern Queensland (Joseph et al., 1995).

Schizomids are generally restricted to humid habitats, either in rainforests, caves or in hothouses (Reddell & Cokendolpher, 1995). Whilst many of the specimens treated below are from rainforest habitats, several specimens were collected at rainforest margins, such as in casuarina or eucalypt woodland. The importance of these findings is difficult to interpret, but it may indicate that schizomids are capable of dispersing between discrete rainforest patches to colouise new areas. However, this is not borne out by the distributional data (Fig. 1), which suggest that the high levels of endemism are due to fragmentation of potential habitat.

The highly localised distributions of *Notozomus* species, as well as those of other schizomids (e.g. Harvey, 1992), suggests that a combination of historical and local factors have played a

significant role in determining their current areas of occupancy. Each species may predate the Pleistocene fragmentation of rainforest habitats during the aridity events in Australia and be more consistent with the model proposed by Joseph et al. (1995) where Miocene/Eocene divergence dates were prevalent amongst several widely distributed but relatively immobile vertebrate species,

REMARKS. The diagnosis given above is slightly modified from Harvey (1992) and Reddell & Cokendolpher (1995), as two of the species described below, N. spec and N. bronwende, possess accessory teeth on the movable cheliceral finger, a feature which was postulated by Harvey (1992) to be absent from all members of the genus. These two species are clearly good members of *Notozomus* as they share the spermathecal morphology characteristic of the genus and a 4-segmented female flagellum. The two species which possess an accessory tooth may represent the most plesiomorphic species of the genus, with those species which lack a tooth representing an apomorphic sister-group. However, further work on the phylogeny of the genus is not possible at present without access to further specimens and a better understanding of the relationships of genera within the Hubbardiinae.

#### Notozomus daviesae Harvey, 1992 (Fig. 1)

Notozomus daviesae Harvey, 1992; 114-116, figs 2, 110-114; Reddell & Cokendolpher, 1995; 84.

D1AGNOS1S. Males most closely resemble those of *N. bronwenae*, but differ in the shape of the dorsal depression of the male flagellum, and *N. daviesae* lacks an accessory tooth on the cheliceral finger. Females unknown.

REMARKS. This species is known from two males taken at Mt Finlay (Harvey, 1992).

## **Notozomus wudjl** sp. nov. (Figs 1, 2)

ETYMOLOGY. The specific name is a noun in apposition taken from the type locality.

MATERIAL. QUEENSLAND: Holotype &, 14.4km N of Wudjl Wudjl, 15°52'S, 145°19'E, 4.xi.1991-20.vii.1992, pitfall trap. PL, RR, MS (QM S24593). OTHER MATERIAL (non-types). QUEENSLAND: 1 juvenile, same data as holotype (QM S52169).

DIAGNOSIS. Males differ by the transverse, sinuate anterior margin of the dorsal depression on the flagellum which, in lateral view, has a concave profile. Females unknown.

DESCRIPTION. Adult Male. Colour vellowbrown. Carapace with 9 setae, arranged 2: 1: 2: 2: 2; anterior margin drawn to a sharply downturned point between chelicerae; eye spots present. Mesopeltidia widely separated, Metapeltidium divided. Anterior sternum with 14 setae, including 2 sternapophysial setae; posterior sternum triangular, with 6 setae. Chaetotaxy of tergites 1-1X: 2+4 (microsetae diagonal): 2+6 (microsetae in column): 2: 2: 2: 2: 4: 4; tergite XII with very small dorsal process. Flagellum (Fig. 2): posterior margin gently rounded, lateral margins sinuate; with dorsal depression of which the anterior margin is transverse and sinuate; seta dm1 situated at base of stalk, d11 in anterior half, dm4 slightly anterior to dl3, vm4 anterior to vl2 and slightly closer to vl1 than to vm4; 1.72 times longer than broad. Pedipalp: probably not sexually dimorphic; without apophyses; trochanter without sharply produced distal extension, ventral margin with stout setae, with mesal spur; tibia and tarsus lacking spines; tarsus with; claw 0.44 length of tarsus. Chelicera: fixed finger with 2 large teeth plus 5 smaller teeth between these, basal tooth with 1 small, blunt, lateral teeth, distal

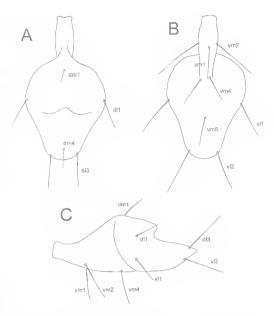


FIG. 2. *Notozomus wudjl* sp. nov., & flagellum; A, dorsal; B, ventral; C, lateral.

tooth without lateral teeth; brush at base of fixed finger composed of 11 setae, each densely pilose in distal half; lateral surface with 3 large, lanceolate, terminally pilose setae; movable finger file composed of 18 long lamellae, blunt guard tooth present subdistally, accessory tooth absent. Legs: tarsus I with 6 segments; femur IV 3.25 times longer than wide.

Dimensions (mm): Body length 4.32. Carapace 1.16/0.70. Chelicera 0.84. Flagellum 0.50/0.29. Pedipalp: TR 0.50, FE 0.52, PA 0.51, TI 0.49, TA 0.26, CL 0.12, total excluding CL 2.28. Leg I: TR 0.55, FE 1.45, PA 1.83, T1 1.33, ME 0.41, TA 0.67, total 6.24. Leg II: TR 0.24, FE 0.86, PA 0.55, TI 0.57, ME 0.46, TA 0.36, total 3.04. Leg III: TR 0.26, FE 0.73, PA 0.37, T1 0.41, ME 0.49, TA 0.38, total 2.64. Leg IV: TR 0.49, FE 1.30, PA 0.66, TI 0.94, ME 0.84, TA 0.64, total 4.87.

REMARKS. *Notozomus wudjl* is virtually sympatric with *N. daviesae* from nearby Mt Finlay which is only 4.1km from the type locality of *N. wudjl*. The two species differ in the morphology of the anterior margin of the dorsal depression of the male flagellum, which in *N. daviesae* is  $\cap$ -shaped, but in *N. wudjl* is transverse and sinuate.

### Notozomus aterpes Harvey, 1992 (Fig. 1)

Notozomus aterpes Harvey, 1992: 112-114, figs 2, 5, 102-109; Reddell & Cokendolpher, 1995: 84, fig. 89.

NEW MATERIAL. QUEENSLAND: 1 \, Cape Tribulation National Pk, Cape Tribulation, 16°04'S, 145°28'E, sea level, sifting leaf litter in coastal forest, 24.vii.1992, C.E. Griswold (CAS).

D1AGNOSIS. Males differ by straight posterior margin of the flagellum. Females are the only species with both distal nodules on the spermathecal receptacula and large nodules on the ducts.

REMARKS. This specimen differs little from other females taken from the type locality (Harvey, 1992).

## **Notozomus majesticus** sp. nov. (Figs 1, 3)

ETYMOLOGY. Latin, *majestas* (majesty, greatness) referring to the imperial size and appearance of this species.

MATERIAL. QUEENSLAND: Holotype, ♂, SE. Windsor Tableland, 16°18'S, 145°05'E, 850m, 9.ii.-17.v.1998, intercept trap. GM, DC (QM S52170). Paratype: 1 ♀, Spencer Creek, Windsor Tableland, 16°16'S, 145°03'E, 1150m, 8.ii.1998, GM, DC (QM S52171).

DIAGNOSIS. Males differ in the position of flagellar seta dm1 which is situated midway between the flagellar stalk and the dorsal depression; they also have a unique lateral margin which is deeply incised. Females lack nodules on the spermathecal receptacula, and possess very sparse nodules on the ducts, thus resembling *N. monteithi* which, however, has more nodules on the ducts.

DESCRIPTION. Adults. Colour dark yellowbrown. Carapace with 9 setae, arranged 2: 1: 2: 2: 2; anterior margin drawn to a sharply downturned point between chelicerae; eye spots present. Mesopeltidia widely separated. Metapeltidium divided. Anterior sternum with 14 (3, 9) setae, including 2 sternapophysial setae; posterior sternum triangular, with 6 (8, 9) setae. Chaetotaxy of tergites 1-1X: 2+4 (microsetae diagonal): 2+6 (microsetae in column): 2: 2: 2: 2: 2: 4: 4; tergite XII with very small dorsal process. Flagellum of  $\delta$  (Fig. 3A-C) with deeply incised lateral margin and rounded posterior margin; seta dm l situated midway between flagellar stalk and dorsal depression, dm4 situated on approximately same level as dl3, vm4 nearly on same level as vII; 1.77 times longer than broad; flagellum of ♀ 4 segmented, first segment slightly longer than

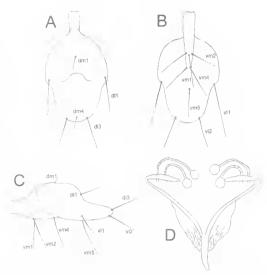


FIG. 3. *Notozomus majesticus* sp. nov., ♂ flagellum; A, dorsal; B, ventral; C, lateral; D, ♀ genitalia, ventral

second and third, fourth longest. Female genitalia (Fig. 3D): 4 spermathecae with rounded receptacula, without distal bifurcations or nodules; on slender, curved ducts originating near distal end of chitinised arch; ducts with sparse nodules; gonopod not bifurcate. Pedipalp: not sexually dimorphic; without apophyses; trochanter without sharply produced distal extension, ventral margin with stout setae, with mesal spur; tibia and tarsus lacking spines; tarsus with spurs; claw 0.31 (3), 0.53 ( $\mathfrak{P}$ ) length of tarsus. Chelicera: fixed finger with 2 large teeth plus 3  $(\delta)$  or 5 ( $\mathfrak{P}$ ) smaller teeth between these, basal tooth with 1 small, blunt, lateral teeth, distal tooth without lateral teeth; brush at base of fixed finger composed of 7 ( $\delta$ ) or 8 ( $\mathfrak{P}$ ) setae, each densely pilose in distal half; lateral surface with 3 large, lanceolate, terminally pilose setae; movable finger file composed of 18 (3), 21 ( $\mathcal{P}$ ) long lamellae, blunt guard tooth present subdistally, accessory tooth absent. Legs: tarsus I with 6 segments; femur IV 3.40 ( $\delta$ ), 2.70 ( $\Upsilon$ ) times longer than wide.

Dimensions (mm),  $\delta$  ( $\varphi$ ): Body length 4.35 (4.25). Carapace 1.28/0.70 (1.38/0.84). Chelicera 0.83 (1.07). Flagellum 0.55/0.31 (0.44). Pedipalp: TR 0.44 (0.61), FE 0.48 (0.62), PA 0.47 (0.58), TI 0.46 (0.55), TA 0.26 (0.30), CL 0.08 (0.15), total excluding CL 2.11 (2.66). Leg I: TR 0.61 (0.49), FE 1.17 (1.32), PA 1.77 (1.60), TI 0.83 (1.19), ME 0.21 (0.41), TA 0.73 (0.58), total 5.32 (5.59). Leg II: TR

0.26 (0.20), FE 0.99 (0.96), PA 0.58 (0.55), TI 0.63 (0.61), ME 0.55 (0.50), TA 0.44 (0.44), total 3.45 (3.16). Leg III: TR 0.27 (0.28), FE 0.81 (0.86), PA 0.38 (0.43), TI 0.44 (0.44), ME 0.55 (0.55), TA 0.44 (0.46), total 2.89 (3.02). Leg IV: TR 0.49 (0.46), FE 1.48 (1.35), PA 0.60 (0.61), TI 1.10 (0.96), ME 0.97 (0.89), TA 0.67 (0.58), total 5.31 (4.85).

REMARKS. This species is known from only two specimens collected on the Windsor Tableland.

#### Notozomus monteithi Harvey, 1992 (Fig. 1)

Notozomus monteithi Harvey, 1992: 116-117, figs 2, 115-117; Reddell & Cokendolpher, 1995: 85.

DIAGNOSIS. Females resemble those of *N. rentzi* in the lack nodules on the spermathecal receptacula, but retain nodules on the ducts; those of *N. rentzi* possess numerous nodules, whereas those of *N. monteithi* have fewer. Males unknown.

REMARKS. This species is known only from Julatten (Harvey, 1992).

## **Notozomus maurophila** sp. nov. (Figs 1, 4)

ETYMOLOGY. Greek, mauros (dark) and phila (affection, fondness) referring to the presence of this species near Black Mt.

MATERIAL. QUEENSLAND: Holotype, &, Black Mt Rd, 5km N of Kuranda, 16°47'S, 145°38'E, 1200m, rainforest, sieved litter, berlesate, 2.xii.1988, GM, GT (QM S25823).

DIAGNOSIS. Malcs are similar to those of *N. daviesae* and *N. rentzi*, but *N. maurophila* differs in the presence of the anteriorly convergent dorsal depression on the male flagellum. Females unknown.

DESCRIPTION. Adult Male. Colour yellowbrown. Carapace with 9 setae, arranged 2: 1: 2: 2: 2; anterior margin drawn to a sharply downturned point between chelicerae; eye spots present. Mesopeltidia widely separated. Metapeltidium divided. Anterior sternum with 14 setae, including 2 sternapophysial setae; posterior sternum triangular, with 6 setae. Chaetotaxy of tergites I-IX: 2+4 (microsetae diagonal): 2+6 (microsetae in column): 2: 2: 2: 2: 2: 4: 4; tergite XII with very small dorsal process. Flagellum (Fig. 4): posterior margin gently rounded, lateral margins sinuate; with dorsal depression which converges anteriorly; seta dm1 situated at base of stalk, dl1 in posterior half, dm4 slightly anterior to dl3,

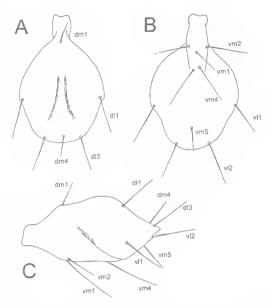


FIG. 4. *Notozomus maurophila* sp. nov., d flagellum; A, dorsal; B, ventral; C, lateral.

vm4 anterior to vl2; I.58 times longer than broad. Pedipalp: probably not sexually dimorphic; without apophyses; trochanter without sharply produced distal extension, ventral margin with stout setae, with mesal spur; tibia and tarsus lacking spines; tarsus with spurs; claw 0.53 length of tarsus. Chelicera: fixed finger with 2 large teeth plus 4 smaller teeth between these, basal tooth with I small, blunt, lateral tooth, distal tooth without lateral tooth; brush at base of fixed finger composed of 8 setae, each densely pilose in distal half; lateral surface with 3 large, lanceolate, terminally pilose setae; movable finger file composed of 16 long lamellae, blunt guard tooth present subdistally, accessory tooth absent near middle of file, but long low swelling present. Legs: tarsus I with 6 segments; femur IV 2.95 times longer than wide.

Dimensions (mm): Body length 3.58. Carapace 1.06/0.60. Chelicera 0.67. Flagellum 0.38/0.24. Pedipalp: TR 0.36, FE 0.44, PA 0.41, TI 0.39, TA 0.19, CL 0.10, total excluding CL 1.79. Leg I: TR 0.45, FE 1.31, PA 1.63, TI 1.19, ME 0.37, TA 0.56, total 5.51. Leg II: TR 0.20, FE 0.75, PA 0.46, TI 0.60, ME 0.44, TA 0.38, total 2.83. Leg III: TR 0.35, FE 0.67, PA 0.32, TI 0.37, ME 0.46, TA 0.38, total 2.55. Leg IV: TR 0.44, FE 1.15, PA 0.56, TI 0.90, ME 0.75, TA 0.53, total 4.33.

# Notozomus elongatus sp. nov. (Figs 1, 5)

ETYMOLOGY. Latin, *elongatus* (prolonged), referring to the shape of the spermathecal receptacula which are unusually long and slender.

MATERIAL. QUEENSLAND: Holotype, 9, Mt Murray Prior, 16°56'S, 145°51'E, pyrethrum, trees, Casuarina, 7.xii.1998, GM (QM S49404).

DIAGNOSIS. Females of *N. elongatus* differ from those of other *Notozomus* species by the elongate spermathecal receptacula which are reflexed such that the apices are directed laterally, Males unknown.

DESCRIPTION. Adult Female. Colour yellowbrown. Carapace with 9 setae, arranged 2: 1:2:2: 2; anterior margin drawn to a sharply downturned point between chelicerae; eye spots present. Mesopeltidia widely separated. Metapeltidium divided. Anterior sternum with 14 setae, including 2 sternapophysial setae; posterior sternum triangular, with 6 setae. Chaetotaxy of tergites 1-1X: 2+4 (microsetae diagonal): 2+6 (microsetae in column): 2: 2: 2: 2: 2: 4: 4; tergite XII with very small dorsal process. Flagellum of 4 segmented, first segment slightly longer than second and third, fourth longest. Female genitalia (Fig. 5): 4 spermathecae with narrow, elongate receptacula, each deeply bifurcate with terminal nodules, receptacula reflexed such that apices are directed laterally; on slender, curved ducts originating near distal end of chitinised arch; ducts with sparse nodules; gonopod not bifurcate. Pedipalp: without apophyses; trochanter without sharply produced distal extension, ventral margin with stout setae, with mesal spur; tibia and tarsus lacking spines; tarsus with spurs; claw 0.45 length of tarsus. Chelicera: fixed finger with 2 large teeth plus 5 smaller teeth between these, basal tooth with 1 small, blunt, lateral tooth, distal tooth without lateral teeth; brush at base of fixed finger composed of 8 setae, each densely pilose in distal half; lateral surface with 3 large, lanceolate, terminally pilose setae; movable finger file composed of 21 long lamellae, blunt guard tooth present subdistally, accessory tooth absent. Legs: tarsus I with 6 segments; femur IV 2.39 times longer than wide.

Dimensions (mm): Body length (slightly shrivelled) ca. 3.0. Carapace 1.04/0.64. Chelicera 0.84. Flagellum 0.35. Pedipalp: TR 0.41, FE 0.49, PA 0.46, Tl 0.46, TA 0.27, CL 0.12, total excluding CL 2.09. Leg 1: TR 0.35, FE 1.04, PA 1.26, Tl 0.93, ME 0.32, TA 0.49, total 4.39. Leg II: TR 0.26, FE

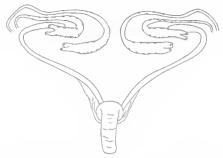


FIG. 5. Notozomus elongatus sp. nov., ♀ genitalia, ventral.

0.78, PA 0.48, TI 0.48, ME 0.44, TA 0.35, total 2.79. Leg III: TR 0.22, FE 0.64, PA 0.34, TI 0.32, ME 0.44, TA 0.41, total 2.37. Leg IV: TR 0.38, FE 1.10, PA 0.50, TI 0.73, ME 0.69, TA 0.48, total 3.88.

REMARKS. The spermathecal receptacula of most *Notozomus* species are spherical in shape, and the elongate receptacula of *N. elongatus* resemble only those of *N. aterpes*, from which it differs by the lack of nodules on the spermathecal ducts and by the greatly elongate receptacula.

It is possible that this species is the female of *N. maurophila*, which is known from a single male collected near Black Mt, some 30km to the northwest of Mt Murray Prior. I am reluctant to regard them as conspecific, as the fragmented speciation patterns evident in the genus (Fig. 1) call for caution prior to such an assumption. Therefore, I await the collection of further material to determine the status of these populations.

### Notozomus rentzi Harvey, 1992 (Fig. 1)

Notozomus rentzi Harvey, 1992; 117-119, figs 2, 118-125; Reddell & Cokendolpher, 1995; 85.

DIAGNOSIS. Males differ by the presence of a dorsal depression in the flagellum which, in lateral view, forms a 90° angle. Females differ by the presence of numerous, contiguous, lateral ducts on the spermathcal ducts.

REMARKS. This species occurs over a wide region of the Atherton Tableland, extending as far east as Bellenden Ker NP (Harvey, 1992).

### Notozomus ker Harvey, 1992 (Fig. 1)

Notozomus ker Harvey, 1992; 119-121, figs 2, 126-133; Reddell & Cokendolpher, 1995; 84.

DIAGNOSIS. Males differ by the presence of a distinct sub-rectangular depression on the

flagellum, and by the position of seta vm4, which is on the same level as vl1. Females differ by the presence of only a few small nodules on the distal portion of the spermathecal ducts.

REMARKS. This species is known only from Cableway Base Station, Bellenden Ker Range, where it is virtually sympatric with *N. rentzi* (Harvey, 1992).

### Notozomus raveni Harvey, 1992 (Fig. I)

Notozomus raveni Harvey, 1992: 121-122, figs 2, 134-138; Reddell & Cokendolpher, 1995: 85.

DIAGNOSIS. Females differ by the lack of nodules on both the spermathecal receptacula and the ducts. Males unknown.

REMARKS. This species is known only from Majors Mt (Harvey, 1992).

## Notozomus curiosus sp. nov. (Figs I, 6)

ETYMOLOGY. Latin, *curiosus* (odd, strange), referring to the uncertain generic position of this unusual species.

MATERIAL. QUEENSLAND: Holotype, &, Mission Beach (S3), 17°50'S, 146°06'E, 10m, pitfall trap C3, 29.iv.-3.vi.1996, MC (QM S52172). Paratype: 1 &, Mission Beach (S2), 17°52'S, 146°05'E, 20m, pitfall trap A3, 29 January-4.iii.1996, MC (WAM 99/3113).

DIAGNOSIS. Males can be recognised by the protruding tip on the flagellum, Females unknown.

DESCRIPTION. Adult Male. Colour yellowbrown. Carapacc with 9 setae, arranged 2: 1: 2: 2: 2; anterior margin drawn to a sharply downturned point between chelicerae; eye spots present. Mesopeltidia widely separated. Metapeltidium divided. Anterior sternum with 13 setae, including 2 sternapophysial setae; posterior sternum triangular, with 7 setae. Chaetotaxy of tergites 1-1X: 2+4 (microsetae diagonal): 2+6 (microsetae in column): 2: 2: 2: 2: 2: 4: 4; tergite XII with very small dorsal process. Flagellum (Fig. 6) with gently rounded lateral margin and rounded posterior margin with protuding tip; seta dml situated at base of flagellar stalk, dm4 situated on same level as dl3, vm4 situated slightly posterior to level of v11; 1.36 times longer than broad. Pedipalp: probably not sexually dimorphic; without apophyses; trochanter without sharply produced distal extension, ventral margin with stout setac, with mesal spur; tibia and tarsus lacking spines; tarsus with spurs; claw 0.48 length of tarsus. Chelicera: fixed finger

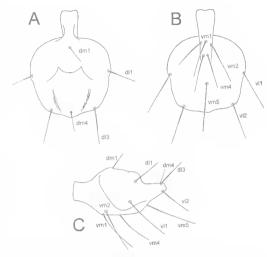


FIG. 6. *Notozomus curiosus* sp. nov., & flagellum; A, dorsal; B, ventral; C, lateral.

with 2 large teeth plus 4 smaller teeth between these, basal and distal teeth without lateral teeth; brush at base of fixed finger composed of 7 setae, each densely pilose in distal half; lateral surface with 3 large, lanceolate, terminally pilose setae; movable finger file composed of 19 long lamellae, blunt guard tooth present subdistally, accessory tooth absent. Legs: tarsus I with 6 segments; femur IV 2.98 times longer than wide.

Dimensions (mm): Body length 3.95. Carapace 1.15/0.59. Chelicera 0.75. Flagellum 0.38/0.28. Pedipalp: TR 0.41, FE 0.49, PA 0.46, TI 0.44, TA 0.23, CL 0.11, total excluding CL 2.03. Leg 1: TR 0.44, FE 1.41, PA 1.71, TI 1.24, ME 0.40, TA 0.55, total 5.75. Leg II: TR 0.25, FE 0.84, PA 0.51, TI 0.52, ME 0.46, TA 0.38, total 2.96. Leg III: TR 0.21, FE 0.73, PA 0.32, TI 0.38, ME 0.46, TA 0.35, total 2.45. Leg IV: TR 0.45, FE 1.28, PA 0.58, TI 0.93, ME 0.87, TA 0.51, total 4.62.

REMARKS. The morphology of the male flagellum is atypical for the genus, and the nature of the female spermathecae are necessary before the generic placement can be assured.

### Notozomus ingham Harvey, 1992 (Figs 1, 7)

Notozomus ingham Harvey, 1992: 123-124, figs 2, 139-143; Reddell & Cokendolpher, 1995: 84.

NEW MATERIAL. QUEENSLAND: 1 &, Gayundah Creek, Hinchinbrook Island, 10m, 7-15.xi.1984, GM, DC, G. Thompson (QM S52173); 1 \, Q, Cardwell Range, Upper

Broadwater Valley, 18°18'S, 145°56'E, 750m, sieved litter, berlesate, 20.xii.1986, GM, GT, Hamlet (QM S25856).

DIAGNOSIS. The male flagellum lacks a distinct lateral profile, and setae dm4 and vm4 are distally situated, thus resembling *N. maurophila*, from which it differs by the  $\cap$ -shaped dorsal depression. Females differ by the possession of small distal nodules on the spermathecal receptacula and numerous nodules on the ducts which extend the full length of the ducts.

DESCRIPTION. Adult Male. Colour yellowbrown. Carapace with 9 setae, arranged 2: 1: 2: 2: 2; anterior margin drawn to a sharply downturned point between chelicerac; eye spots present. Mesopeltidia widely separated. Metapeltidium divided. Anterior sternum with 15 setae, including 2 sternapophysial setae; posterior sternum triangular, with 6 setae. Chaetotaxy of tergites 1-1X: 2+4 (microsetac diagonal): 2+6 (microsetae in column): 2: 2: 2: 2: 2: 4: 4; tergite XII with very small dorsal process. Flagellum of ♂ (Fig. 7) with gently rounded lateral margin and rounded posterior margin; seta dm1 situated at base of flagellar stalk, dm4 situated slightly anterior to dl3, vm4 situated slightly anterior to level of v12; 1.46 times longer than broad. Pedipalp: not sexually dimorphic; without apophyses; trochanter without sharply produced distal extension, ventral margin with stout setae, with mesal spur; tibia and tarsus lacking spines; tarsus with spurs; claw 0.43 length of tarsus. Chelicera: fixed finger with 2 large teeth plus 4 smaller teeth between these, basal tooth with 1 small, blunt, lateral teeth, distal tooth without lateral tooth; brush at base of fixed finger composed of 7 setae, each densely pilose in distal half; lateral surface with 3 large, lanceolate, terminally pilose setae; movable finger file composed of 19 long lamellae, blunt guard tooth present subdistally, accessory tooth absent. Legs: tarsus 1 with 6 segments; femur IV 2.98 times longer than wide.

Dimensions (mm): Body length 2.95. Carapace 0.99/0.55. Chelicera 0.70. Flagellum 0.38/0.26. Pedipalp: TR 0.40, FE 0.45, PA 0.43, TI 0.41, TA 0.21, CL 0.09, total excluding CL 1.90. Leg I: TR 0.41, FE 1.57, PA 1.57, TI 1.10, ME 0.35, TA 0.51, total 5.51. Leg II: TR 0.20, FE 0.83, PA 0.47, TI 0.51, ME 0.46, TA 0.38, total 2.85. Leg III: TR 0.20, FE 0.70, PA 0.32, TI 0.36, ME 0.47, TA 0.38, total 2.43. Leg IV: TR 0.37, FE 1.19, PA 0.58, TI 0.84, ME 0.78, TA 0.49, total 4.25.

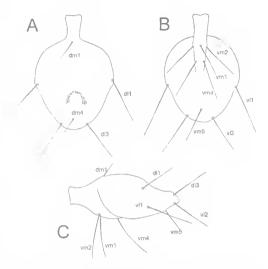


FIG. 7. Notozomus ingham Harvey, & flagellum; A, dorsal; B, ventral; C, lateral.

REMARKS. The male from Hinchinbrook Island is the first male of this species to be described. Without males from the other localities from which this species has been reported, I cannot be certain that they all represent the same species. My suspicion that more than one species may be involved is fuelled by the large range exhibited by the species — no other species is known from such a broad zone — and that the rainforest patches are not continuous. The new female specimen from Cardwell Range differs little from other females of *N. ingham* recorded by Harvey (1992).

Notozomus spec (Harvey, 1992), comb. nov. (Figs 1, 8)

Apozomus spec Harvey, 1992: 103-105, figs 2, 76-80; Reddell & Cokendolpher, 1995; 61.

NEW MATERIAL. QUEENSLAND: 1 \$\, \text{Paluma}, 19\circ{0}1\circ{S}, 146\circ{0}2\circ{E}, 6.v.1993, E.S. Volschenk, J. Saunders (QM \$52174); 1 \$\delta\$, 7km NW of Paluma, 18\circ{0}58\circ{S}\$, 146\circ{0}9\circ{E}, under log in burnt forest, 20.iv.1993, MH, BS (WAM 99/3110); 1 \$\delta\$, Mt Spec, 19\circ{0}0\circ{S}\$, 146\circ{0}11\circ{E}, 875m, pitfall trap B1, 9.iii.-6.iv.1995, MC (WAM 99/3111); 1 \$\delta\$, same data except pitfall trap B2 (WAM 99/3112).

DIAGNOSIS. Males differ by positions of flagellar setae dm4 and vm4, which are situated midway between dl1 and dl3, and vl1 and vl2, respectively, and by the shape of the dorsal depression. Females differ by the possession of small distal nodules on the spermathecal receptacula and nodules on the ducts which extend only partway down the length of the ducts.

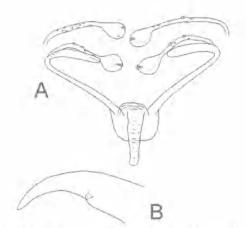


FIG. 8. Notozomus spec (Harvey); A, § genitalia, ventral; B, left movable cheliceral finger.

DESCRIPTION. Adult Female. Colour yellowbrown. Carapace with 9 setae, arranged 2: 1: 2: 2: 2; anterior margin drawn to a sharply downturned point between chelicerae; eye spots present. Mesopeltidia widely separated. Metapeltidium divided. Anterior sternum with 15 setae, including 2 sternapophysial setae; posterior sternum triangular, with 6 setae. Chaetotaxy of tergites I-IX: 2+4 (microsetae diagonal): 2+6 (microsetae in column): 2: 2: 2: 2: 2: 4: 4; tergite XII with very small dorsal process. Flagellum 4 segmented, first segment slightly longer than second and third, fourth longest. Female genitalia (Fig. 8A): 4 spermathecae with rounded receptacula, each with a distal nodule; on slender, curved ducts originating near distal end of chitinised arch; ducts covered with sparse nodules; gonopod not bifurcate. Pedipalp: not sexually dimorphie; without apophyses; trochanter without sharply produced distal extension, ventral margin with stout setae, with mesal spur; tibia and tarsus lacking spines; tarsus with spurs; claw 0.39 length of tarsus. Chelicera; fixed finger with 2 large teeth plus 4 smaller teeth between these, basal tooth with 1 small, blunt, lateral teeth, distal tooth without lateral teeth; brush at base of fixed finger composed of 7 setae, each densely pilose in distal half; lateral surface with 3 large, lanceolate, terminally pilose setae; movable finger file composed of 16 long lamellae, blunt guard tooth present subdistally. accessory tooth, consisting of a long low mound, present near middle of file (Fig. 8B). Legs: tarsus I with 6 segments; femur IV 2.60 times longer than wide.

Dimensions (mm): Body length 4.15. Carapace 1.15/0.43. Chelicera 0.81. Flagellum 0.32. Pedipalp: TR 0.43, FE 0.33, PA 0.46, TI 0.44, TA 0.23, CL 0.09, total excluding CL 1.89. Leg I: TR 0.34, FE 1.01, PA 1.22, TI 0.64, ME 0.32, TA 0.44, total 3.97. Leg II: TR 0.23, FE 0.62, PA 0.54, TI 0.47, ME 0.40, TA 0.35, total 2.61. Leg III: TR 0.26, FE 0.70, PA 0.33, TI 0.36, ME 0.44, TA 0.35, total 2.44. Leg IV: TR 0.32, FE 1.12, PA 0.55, TI 0.78, ME 0.68, TA 0.45, total 3.90.

REMARKS. Harvey (1992) described Apozomus spec from a single male from Mt Spec, situated near Paluma, Queensland, and erroneously stated that the flagellum was 0.28mm in length and 0.20mm in width — in fact, the flagellum is 0.48 long and 0.40mm wide. The three new males listed above from Paluma and Mt Spec differ very little from the holotype, but the morphology of the female, newly recorded here from Paluma, shows the distinctive spermathecal morphology (Fig. 8A) characteristic of the genus Notozomus. The movable cheliceral finger bears a long low mound (Fig. 8B) situated near where a tooth is found in other genera, such as Apozomus (Harvey, 1992). The presence of this tooth led me to place this species in Apozomus. Females of N. paluma are most similar to N. ker Harvey from Bellenden Ker Range, Queensland, but differ in the presence of extremely small nodules on the spermathecal receptacula.

### Notozomus bronwenae sp. nov. (Figs 1, 9)

ETYMOLOGY. For Dr Bronwen Scott, who assisted in the collection of the type specimens.

MATERIAL EXAMINED. QUEENSLAND: Holotype, ♂, Wishing Pool, Eungella NP, 21°12'S, 148°32'E, from rotting log, 25.iv.1993, MH, BS (QM S52175). Paratype: 1 ♀, collected with holotype (QM S52176).

DIAGNOSIS. Males most closely resemble those of *N. daviesae*, but they differ in the shape of the dorsal depression of the male flagellum, and *N. bronwenae* possesses an accessory tooth on the cheliceral finger Females differ by the twisted spermathecal ducts.

DESCRIPTION. Adults. Colour yellow-brown. Carapace with 9 setae, arranged 2: 1: 2: 2: 2; anterior margin drawn to a sharply downturned point between chelicerae; eye spots present. Mesopeltidia widely separated. Metapeltidium divided. Anterior sternum with 15 ( $\delta$ ), 16 ( $\varphi$ ) setae, including 2 sternapophysial setae; posterior sternum triangular, with 6 ( $\delta$ ,  $\varphi$ ) setae.

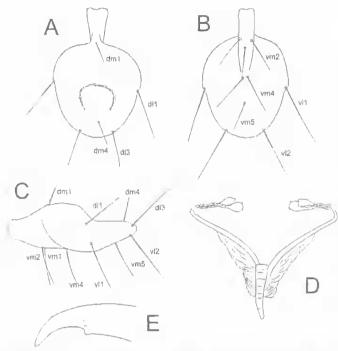


FIG. 9. Notozomus bronwenue sp. nov., ♂ flagellum; A, dorsal; B, ventral; C, lateral; D, ♀ genitalia, ventral; E, left movable cheliceral finger,

Chaetotaxy of tergites 1-1X: 2+4 (microsetae diagonal): 2+6 (microsetae in column): 2: 2: 2: 2: 2: 4: 4; tergite XII with very small dorsal process. Flagellum of 3 (Fig. 9A-C) with gently rounded lateral margin and rounded posterior margin; seta dm1 situated at base of flagellar stalk, dm4 situated slightly anterior to dl3, vm4 midway hetween level of vl1 and vl2; 1.57 times longer than broad; flagellum of 9 4 segmented, first segment slightly longer than second and third, fourth longest. Female genitalia (Fig. 9D): 4 spermathecae with rounded receptacula, each with 2 terminal nodules: on slender, twisted ducts originating near distal end of chitinised arch; ducts with sparse nodules; gonopod not bifurcate. Pedipalp: not sexually dimorphic: without apophyses; trochanter without sharply produced distal extension, ventral margin with stout setae. with mesal spur; tibia and tarsus lacking spines; tarsus with spurs; claw 0.44 ( $\delta$ ), 0.46 ( $\Re$ ) length of tarsus. Chelicera: fixed finger with 2 large teeth plus 4 smaller teeth between these, basal tooth with I extremely small, blunt, lateral tooth, distal tooth of 9 with 1 small, blunt, lateral tooth. of d without lateral tooth; brush at base of fixed finger composed of 7 (3), 8 ( $\circ$ ) setac, each densely pilose in distal half; lateral surface with 3 large, lanceolate, terminally pilose setae; movable finger file composed of 18 ( $\delta$ ), 17 ( $\circ$ ) long lamellae, blunt guard tooth present subdistally, accessory tooth present near middle of file (Fig. 9E). Legs: tarsus I with 6 segments; femur IV 2.93 ( $\delta$ ), 3.10 ( $\circ$ ) times longer than wide.

Dimensions (mm),  $\delta$  ( $\mathfrak{P}$ ): Body length 4.05 (4.10). Carapace 1.16/0.56 (1.12/0.67). Chelicera 0.73 (0.86). Flagellum 0.44/0.28 (0.32), Pedipalp: TR 0.39 (0.41), FE 0.48 (0.49), PA 0.46 (0.47), TI 0.43 (0.44), TA 0.25 (0.26), CL 0.11 (0.12), total excluding CL 2.01 (2.07). Leg I: TR 0.35 (0.34), FE 1.28 (1.07), PA 1.58 (1.24), TI 1.19 (0.94), ME 0.38 (0.31), TA 0.61 (0.49), total 5.39 (4.39). Leg II: TR 0.21 (0.22). FE 0.82 (0.78), PA 0.49 (0.41), TI 0.53 (0.46), ME 0.45 (0.40), TA 0.38 (0.37), total 2.88 (2.64). Leg III: TR 0.23 (0.24), FE 0.72 (0.69), PA 0.35 (0.35), TI 0.39 (0.36), ME 0.47 (0.41), TA 0.40 (0.38), total 2.56

(2.43). Leg IV: TR 0.39 (0.36). FE 1.20 (1.10), PA 0.56 (0.52), TI 0.85 (0.77), ME 0.78 (0.68), TA 0.52 (0.48), total 4.30 (3.91).

REMARKS. Notozomus bronwenae, known only from Eungella National Park, differs from other species of the genus by the shape of the dorsal depression of the male flagellum, and the twisted spermathecal ducts. The morphology of the female genitalia is characteristic of the genus Notozomus, but the presence of an accessory tooth on the movable cheliceral finger is quite atypical, being found elsewhere in the genus only in N. spec, thus necessitating an alteration in the generic diagnosis presented by Harvey (1992) and Reddell & Cokendolpher (1995).

### Notozomus jacquelinae sp. nov. (Figs 1, 10)

ETYMOLOGY. This elegant species is named for the late Prof. Jacqueline Heurtault in recognition for her contributions to arachnology, whose untimely death occurred whilst I was midway through describing this species, I was fortunate to be able to call her a friend. MATERIAL. QUEENSLAND: Holotype, &, Mt Abbot, RF (= rainforest) gully, 20°06'S, 147°45'E, 750m, pyrethrum, trees and rocks, 10.iv.1997, GM (QM S35340). Paratypes: 1 \( \frac{1}{2}\), same data as holotype (QM S52177); 1 \( \frac{1}{2}\), same data except leaf litter, 11.iv.1997 (QM S35341); 1 \( \frac{1}{2}\), 3 \( \frac{1}{2}\), 1 juvenile, Mt Abbot, 9-12.iv.1997, GM, DC, Janetzki (QM S35339); 1 \( \frac{1}{2}\), same data (WAM 99/3114).

DIAGNOSIS. Males differ by the raised medial carina, which bears seta dm4. Females possess nodules on the spermathecal receptacula and the ducts.

DESCRIPTION. Adults. Colour dark yellow-brown, legs with a slight green hue. Carapace with 9 setae, arranged 2: 1: 2: 2: 2; anterior margin drawn to a sharply downturned point between chelicerae; eye spots present. Mesopeltidia widely separated. Metapeltidium divided. Anterior sternum with 14(3), 13(9) setae, including 2 sternapophysial setae;

posterior sternum triangular, with  $6(\delta, 9)$  setae. Chaetotaxy of tergites 1-1X: 2+4 (microsetae diagonal): 2+6 (microsetae in column): 2: 2: 2: 2: 2: 4: 4; tergite XII with very small dorsal process. Flagellum of 3 (Fig. 10A-C) with gently rounded lateral margin and rounded posterior margin, medially with raised carina which bears seta dm4; seta dm1 situated at base of flagellar stalk, dm4 situated slightly closer to level of dl3 than to dl2, vm4 midway between level of vl1 and vl2; 1.44 times longer than broad; flagellum of ♀ 4 segmented, first segment slightly longer than second and third, fourth longest. Female genitalia (Fig. 10D): 4 spermathecae with ovoid receptacula, each with 2 distal nodules and small nodules on outer surface; on slender, curved ducts originating from chitinised arch; ducts covered with nodules, some of which protude from the surface of the duct; gonopod not bifurcate. Pedipalp: not sexually dimorphic; without apophyses; trochanter without sharply produced distal extension, ventral margin with stout setae, with mesal spur; tibia and tarsus lacking spines; tarsus with spurs; claw 0.40 (3), 0.46 (♀) length of tarsus. Chelicera: fixed finger with 2 large teeth plus 4 smaller teeth between these, basal tooth with 1 small, blunt, lateral tooth, distal tooth without lateral teeth; brush at

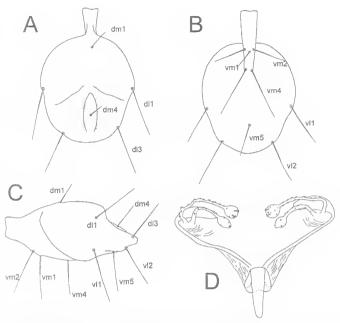


FIG. 10. *Notozomus jacquelinae* sp. nov., ♂ flagellum; A, dorsal; B, ventral; C, lateral; D, ♀ genitalia, ventral.

base of fixed finger composed of 9 ( $\circlearrowleft$ ), 8 ( $\circlearrowleft$ ) setae, each densely pilose in distal half; lateral surface with 3 large, lanceolate, terminally pilose setae; movable finger file composed of 19 ( $\circlearrowleft$ ), 18 ( $\circlearrowleft$ ) long lamellae, blunt guard tooth present subdistally, accessory tooth absent. Legs: tarsus I with 6 segments; femur IV 3.93 ( $\circlearrowleft$ ), 3.68 ( $\circlearrowleft$ ) times longer than wide.

Dimensions (mm),  $\delta$  ( $\mathfrak{P}$ ): Body length 4.40 (4.50). Carapace 1.36/0.70 (1.28/0.73). Chelicera 0.84 (0.92). Flagellum 0.49/0.34 (0.38). Pedipalp: TR 0.47 (0.49), FE 0.52 (0.53), PA 0.52 (0.52), TI 0.46 (0.49), TA 0.25 (0.26), CL 0.10 (0.12), total excluding CL 2.22 (2.29). Leg 1: TR 0.63 (0.39), FE 1.89 (1.17), PA 2.41 (1.42), TI 1.78 (1.05), ME 0.54 (0.35), TA 0.70 (0.51), total 7.95 (4.89), Leg 11: TR 0.24 (0.23), FE 1.08 (0.90), PA 0.60 (0.50), T1 0.73 (0.53), ME 0.60 (0.47), TA 0.44 (0.43), total 3.69 (3.06). Leg 111: TR 0.27 (0.22), FE 0.92 (0.75), PA 0.44 (0.39), TI 0.51 (0.42), ME 0.61 (0.48), TA 0.45 (0.42), total 3.20 (2.68). Leg IV: TR 0.60 (0.42), FE 1.73 (1.25), PA 0.77 (0.58), T1 1.33 (0.90), ME 1.12 (0.78), TA 0.67 (0.52), total 6.22 (4.48).

REMARKS. This is one of the largest species of the genus, and is known only from Mt Abbot situated some 50km WSW of Bowen.

# Notozomus faustus sp. nov. (Figs 1, 11)

ETYMOLOGY, Latin, *faustus* (favourable, fortunate, lucky), referring to the luck involved in collecting this small species.

MATERIAL. QUEENSLAND: Holotype, ♀, Conway NP, 20°17'30"S, 148°46'20"E, eucalypt woodland, pitfall trap, 7.xi.1991–28.vii.1992, PL, RR, MS (QM S22766). OTHER MATERIAL (non-types). 1 juvenile, Conway National Park, 20°17'30"S, 148°46'15"E, eucalypt woodland, pitfall trap, 3.xii.1992–22.iv.1993, RR, S. Raven, PL & E. Lawless (QM S24596).

DIAGNOSIS. Females possess very few nodules on the spermathecal receptacula and the ducts. Males unknown.

DESCRIPTION. Adult Female. Colour yellowbrown. Carapace with 9 setae, arranged 2: 1: 2: 2: 2; anterior margin drawn to a sharply downturned point between chelicerae; eye spots present. Mesopeltidia widely separated. Metapeltidium divided. Anterior sternum with 14 setae, including 2 sternapophysial setae; posterior sternum triangular, with 6 setae. Chaetotaxy of tergites 1-IX: 2+4 (microsetae diagonal): 2+6 (microsetae in column): 2: 2: 2: 2: 4: 4; tergite XII with very small dorsal process. Flagellum 4 segmented, first segment slightly longer than second and third, fourth longest. Female genitalia (Fig. 11): 4 spermathecae with ovoid receptacula, each shallowly bifurcate, external pair with few nodules; on slender, curved ducts originating from chitinised arch; ducts sparsely covered with nodules; gonopod not bifurcate. Pedipalp: without apophyses; trochanter without sharply produced distal extension, ventral margin with stout setae, with mesal spur; tibia and tarsus lacking spines; tarsus with spurs; claw 0.43 length of tarsus. Chelicera: fixed finger with 2 large teeth plus 4 smaller teeth between these, basal tooth with 1 small, blunt, lateral teeth, distal tooth without lateral teeth; brush at base of fixed finger composed of 7 sctae, each densely pilose in distal half; lateral surface with 3 large, lanceolate, terminally pilose setae; movable finger file composed of 18 long lamellae, blunt guard tooth present subdistally, accessory tooth absent. Legs: tarsus I with 6 segments; femur IV 2.57 times longer than wide.

Dimensions (mm): Body length ca. 3.4. Carapace 1.04/0.58. Chelicera 0.75. Flagellum 0.28. Pedipalp: TR 0.44, FE 0.46, PA 0.44, TI 0.41, TA 0.23, CL 0.10, total excluding CL 1.98. Leg I: TR 0.30, FE 0.90, PA 1.07, TI 0.83, ME 0.29, TA 0.42, total 3.81. Leg II: TR 0.21, FE 0.70, PA 0.41, TI 0.42, ME 0.35, TA 0.32, total 2.41. Leg III: TR 0.19, FE 0.58, PA 0.29, TI 0.31, ME 0.38,



FIG. 11. Notozomus faustus sp. nov., ♀ genitalia, ventral.

TA 0.32, total 2.07. Leg IV: TR 0.34, FE 0.97, PA 0.46, TI 0.67, ME 0.56, TA 0.40, total 3.40.

REMARKS. The sole adult available for description is in poor condition through overclearing in the pitfall trap preservative. Nevertheless, it is clearly different from other members of the genus by the presence of only a few nodules on the spermathecal ducts, as well as nodules on the receptacula.

# Notozomus boonah sp. nov. (Figs 1, 12)

Apozomus woodwardi Harvey, 1992: 105-107 (misidentification, in part, specimen from near Boonah, Qld).

ETYMOLOGY. The specific name is a noun in apposition taken from the type locality.

MATERIAL. QUEENSLAND: Holotype, ♀, 16km N of Boonah (ca. 27°52'S, 152°41'E), cx leaf litter, 28.viii.1988, C. Burwell (QM cx-UQIC).

DIAGNOSIS. Females differ by the shape of the chitinised arch which forms a very narrow angle in mid-line. Males unknown.

DESCRIPTION. Adult female. Colour yellowbrown. Carapace with 9 setae, arranged 2: 1: 2: 2: 2; anterior margin drawn to a sharply downturned point between chelicerae; eye spots present. Mesopeltidia widely scparated. Metapeltidium divided. Anterior sternum with 14 setae, including 2 sternapophysial setae; posterior sternum triangular, with 6 setae. Chaetotaxy of tergites I-IX: 2+4 (microsetae diagonal): 2+6 (microsetae in column): 2: 2: 2: 2: 2: 4: 4; tergite XII with vcry small dorsal process. Flagellum: 4 segmented, first segment slightly longer than second and third, fourth longest. Female genitalia (Fig. 12): 4 spermathecae with ovoid receptacula,

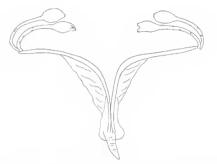


FIG. 12. Notozomus boonah sp. nov., 9 genitalia, ventral.

each with 2 distal nodules, those on mesal pair forming large horns; on slender, curved ducts originating from chitinised arch, which form a very narrow angle in mid-line; ducts sparsely covered with nodules; gonopod not bifurcate. Pedipalp: without apophyses; trochanter without sharply produced distal extension, ventral margin with stout setac, with mesal spur; tibia and tarsus lacking spines; tarsus with spurs; claw 0.48 length of tarsus. Chelicera: fixed finger with 2 large teeth plus 4 smaller teeth between these, basal and lateral teeth each with 1 small, blunt, lateral tooth; brush at base of fixed finger composed of 7 setae, each densely pilose in distal half; lateral surface with 3 large, lanceolate, terminally pilose setae; movable finger file composed of 15 long lamellae, blunt guard tooth present subdistally, accessory tooth absent, but long, low flange present near middle of file. Legs: tarsus I with 6 segments; femur IV 2.50 times longer than wide.

Dimensions (mm): Body length 4.15. Carapace 1.09/0.64. Chelicera 0.73. Flagellum 0.28. Pedipalp: TR 0.38, FE 0.42, PA 0.41, TI 0.39, TA 0.23, CL 0.11, total excluding CL 1.83. Leg 1: TR 0.32, FE 0.91, PA 1.39, TI 0.84, ME 0.29, TA 0.50, total 4.25. Leg 11: TR 0.20, FE 0.65, PA 0.41, TI 0.44, ME 0.39, TA 0.32, total 2.41. Leg III: TR 0.20, FE 0.64, PA 0.32, TI 0.36, ME 0.38, TA 0.35, total 2.25. Leg IV: TR 0.35, FE 0.95, PA 0.48, TI 0.27, ME 0.61, TA 0.41, total 3.07.

REMARKS. The only known specimen of this enigmatic species was misidentified as Apozomus woodwardi by Harvey (1992), who did not dissect the female genitalia. Re-examination clearly shows that it is not conspecific with A. woodwardi, which has since been transferred to the genus *Brignolizomus* (Harvey, 2000), and it represents a species of *Notozomus*. It is by far the most southerly member of the genus *Notozomus*.

#### ACKNOWLEDGEMENTS

Specimens forming the basis of this revision were very kindly supplied by Robert Raven, Phil Lawless and Geoff Monteith (Queensland Museum), Charles Griswold (California Academy of Sciences), David Walter and Greg Daniels (University of Queensland), and Erich Volschenk (Curtin University of Technology, Perth).

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